

In the Claims:

Cancel Claims 67 and amend Claim 76.

1-63 (Cancelled).

64. (Previously presented). A method for tempering at least one specimen, wherein a plastic-based electrically conductive material of a specimen carrier (1, 14) consisting at least partially of this material for at least one specimen is applied to by an electric current/an electric voltage which causes a resistance heating of at least one portion of the plastic-based electrically conductive material, which resistance heating heats a specimen disposed on the specimen carrier (1, 14),

wherein a volume of the specimen is capacitively measured on the specimen carrier,

wherein at least one capacitive measuring sensor (17) of the specimen carrier (14) which is associated with a memory location and/or a volume(15) for a specimen and is connected to a capacitance measuring circuit for a capacitive measurement, and

wherein the at least one capacitive measuring sensor (17) has capacitor plates formed by the plastic-based electrically conductive material of which the

specimen carrier (14) is partially made are connected to the capacitance measuring circuit for a capacitive measurement.

65. (Previously presented). A method for tempering at least one specimen, wherein a plastic-based electrically conductive material of a specimen carrier (1, 14) consisting at least partially of this material for at least one specimen is applied to by an electric current/an electric voltage which causes a resistance heating of at least one portion of the plastic-based electrically conductive material, which resistance heating heats a specimen disposed on the specimen carrier (1, 14), and wherein the specimen (14) is contacted by means of electrically conductive needles (20) in order to apply the electric current/the electric voltage to the specimen carrier (14) for resistance heating and/or to connect the capacitance measuring circuit to the capacitive measuring sensor (17).

66-67. (Cancelled).

68. (Previously presented). A apparatus for tempering at least one specimen, comprising

- a microtitration plate made of plastic-based, at least partially electrically conductive material for at least one specimen, and
- a device for applying an electric current and/or electric voltage to the plastic-based electrically conductive material in order to cause a resistance heating of

at least some part of the plastic-based electrically conductive material, which heating heats a specimen disposed on the microtitration plate wherein the device for applying an electric current and/or an electric voltage, and a capacitance measuring circuit are adapted to be connected to the microtitration plate via a needle bed adapter (19).

69. (Previously presented). The apparatus according to claim 68, wherein the microtitration plate has a web defining a memory location and/or memory volume for the specimen and made of the plastic-based electrically conductive material.

70. (Previously presented). The apparatus according to claim 68, comprising portion which comprises the device for applying an electric current and/or an electric voltage and/or the capacitance measuring circuit and/or the needle bed adapter (19) and is separable from the microtitration plate.

71. (Previously presented). The apparatus according to claim 70, wherein the separable apparatus portion is stationary and/or portable.

72. (Previously presented). The apparatus according to claim 70, wherein the separable apparatus portion comprises a proportioning device, and/or spectrometer, and/or device for treating microtitration plates.

73. (Previously presented). The apparatus according to claim 68, wherein the device for applying an electric current and/or electric voltage has a direct-current source and/or an alternating-current source and/or a direct voltage and/or an alternating-current source.

74. (Previously presented). The apparatus according to claim 68, wherein the device for applying an electric current and/or an electric voltage have one or more temperature measuring devices.

75. (Previously presented). The apparatus according to claim 68, wherein the device for applying an electric current and/or electric voltage has a device for controlling the heating of the specimen.

76. (Currently amended). The apparatus for tempering at least one specimen comprising:

- a microtitration plate made of plastic-based, at least partially electrically conductive material for at least one specimen, and
- a device for applying an electric current and/or electric voltage to the plastic-based electrically conductive material in order to cause a resistance heating of at least some part of the plastic-based electrically conductive material, which heating heats a specimen disposed on the microtitration plate,

wherein the microtitration plate has at least one capacitive measuring sensor (17) associated with a memory location and/or memory volume (15) for a specimen to measure the volume of at least one specimen, and a capacitance measuring circuit connected to the capacitive measuring sensor (17),

wherein the capacitive measuring sensor has capacitor plates (17) which are formed of a same material of which the microtitration plate is partially made,

~~according to claim 67,~~ wherein the specimen carrier and the devices (6,7,9) for applying an electric and/or an electric voltage and/or the capacitance measuring circuit have electric contacts via which electric current and/or electric voltage can be applied to the specimen carrier and/or is adapted to be connected to the capacitive measuring sensor (17) via the capacitance measuring circuit.